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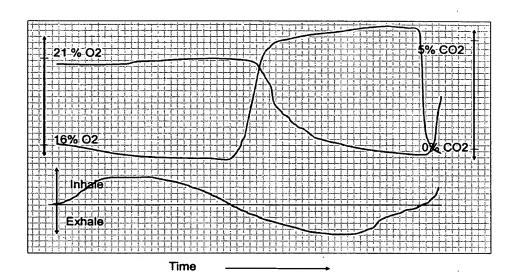
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Docket No.: BRAG-0002
App No.: Not yet assigned. Filed: Herewith
Title: Method and Apparatus for Estimation of Resting Respiratory Quotient
Inventors: James R. Braig
Attorney: Michael P. Dunnam Phone: (215) 568-3100
Sheet 1 of 11



Docket No.: BRAG-0002
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Sheet 2 of 11

	Athletic Volunteer				Γ						
	Resting Condition								Ī		
									Ī		
		Clinical	Measurement			Computed using Invention					
			Water Saturated	R		Dry Equivalent	Difference	RET		RET-R	
		Inspired	End Tidal			End Tidal		- the specific		error	
Run 1	Oxygen	159.6	103	0.67		109.79	49.81	0.71	٦	0.04	
	CO2	0	33			35.18	35.18		Ī		
								dvissan	][		
Run 2	Oxygen	159.6	94	0.67		100.20	59.40	0.65		-0.02	
	CO2	0	36			38.37	38.37				
								ОПОСТИВНИТЕ			
Run 3	Oxygen	159.6	101	0.71		107.66	51.94	0.70		-0.01	
	CO2	0	34			36.24	36.24			-	
										4	
Run 4	Oxygen	159.6	112	0.80		119.38	40.22	0.80		-0.00	
	CO2	0	30			31.98	31.98	Total defends	A-1-1-1	174411	
				=					Ī	=	
			Average	0.71	П		Average	0.71		-0.00	

Docket No.: BRAG-0002
App No.: Not yet assigned.
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Attorney: Michael P. Dunnam
Sheet 3 of 11

	Normal Man			PERMIT				1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		au de la companya de
	Resting				Ŭ					
					Π					
		Clinical Measurement				Computed	ntion			
	rate pro-		Water Saturated	R		Dry Equivalent	Difference	RET	-	RET-R
		Inspired	End Tidal			End Tidal				error
Run 1	Oxygen	159.6	112	0.94		119.38	40.22	0.93		-0.01
	CO2	0	35			37.31	37.31	·		
Run 2	Oxygen	159.6	105	0.81		111.92	47.68	0.85		0.04
	CO2	0	38			40.50	40.50			
	H 12 7 74 74 74 74 74 74 74 74 74 74 74 74 7									
Run 3	Oxygen	159.6	105	0.81		111.92	47.68	0.83		0.02
	CO2	• 0	37			39.44	39.44			
Run 4	Oxygen	159.6	103	0.76		109.79	49.81	0.81		0.05
	CO2	0	38			40.50	40.50			
Run 5	Oxygen	159.6	102	0.76		108.72	50.88	0.80		0.04
	CO2	0	38			40.50	40.50			
Run 6	Oxygen	159.6	106	0.88		112.99	46.61	0.85		-0.03
	CO2	0	37			39.44	39.44			
				=				=		=
			Average	0.83			Average	0.84		0.01

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Sheet 4 of 11

and the second	Normal Man							The state of the s		
	2 Min after	starting Exer	cise		Ī				Ī	
appy and An es and	Heart Rate 183							The state of participation of the state of t		111111111111111111111111111111111111111
	Work output Watts	: 40 - 80						4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
										1
		Clinical Mea				Computed	using Inven	tion		- Indiana
			Water Saturated	R		Dry Equivalent	Difference	RET		RET-R
		Inspired	End Tidal			End Tidal		The state of the s		error
Run 1	Oxygen	159.6	101	0.84		107.66	51.94	0.86		0.02
	CO2	0	42			44.77	44.77			
Run 2	Oxygen	159.6	101	0.87		107.66	51.94	0.84	L	-0.03
	CO2	0	41		₫	43.70	43.70		<u></u>	
Run 3	Oxygen	159.6	102	0.88		108.72	50.88	0.88	Ĺ	-0.00
	CO2	0	42	L		44.77	44.77	0.00		-0.00
Run 4	Oxygen	159.6	100	0.90		106.59	53.01	0.88		-0.02
	CO2	0	44			46.90	46.90			
Run 5	Oxygen	159.6	103	0.92	Ц	109.79	49.81	0.92	L	0.00
	CO2	0	43		₫	45.83	45.83		Ĺ	
					U					
					Ц			=	Ļ	=
			Average	0.88	╝		Average	0.88		-0.00

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Sheet 5 of 11

	Normal Man							To the second se	
	5 Min afte	r starting I	Exercise		Ī				
	Heart Rate	195 - 207			Π				
	Work outp	ut 100 - 140	Watts		Ī				
					Π				
	Clinical Measurement				Ī	Computed 1	ising Invent	ion	
			Water Saturated	R		Dry Equivalent	Difference	RET	RET- R
		Inspired	End Tidal			End Tidal			error
Run 1	Oxygen	159.6	107	1.02		114.05	45.55	1.01	-0.01
	CO2	0	43			45.83	45.83		
									di d
Run 2	Oxygen	159.6	106	1.06		112.99	46.61	0.98	-0.08
•	CO2	0	43			45.83	45.83		
								The formation of	
Run 3	Oxygen	159.6	107	1.03		114.05	45.55	1.01	-0.02
**************************************	CO2	0	43			45.83	45.83		
Run 4	Oxygen	159.6	108	1.10		115.12	44.48	1.03	-0.07
	CO2	0	43			45.83	45.83		
								eth-radiety	
Run 5	Oxygen	159.6	109	1.07		116.19	43.41	1.03	-0.04
	CO2	0	42			44.77	44.77		
								=	=
				1.06			Average	1.01	-0.04

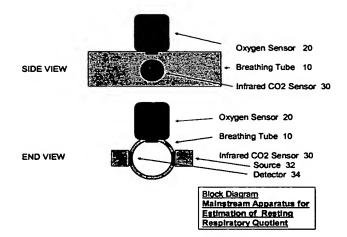
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Sheet 6 of 11

	Normal Man	10 This property of the Control of t						1	Γ	
	JL	er starting	Exercise		П					
	Heart Rate 213-225				П				Ц	
	Work Output 180 - 200 Watts				П				Π	
					П				Η	
	Clinical Measurement				П	Computed 1	ising Invent	ion		<u> </u>
			Water		П	Dry			Π	
			Saturated	R		Equivalent	Difference	RET		RET-R
		Inspired	End Tidal			End Tidal				error
Run 1	Oxygen	159.6	112	1.18		119.38	40.22	1.11		-0.07
+	CO2	0	42			44.77	44.77	1		
									П	
Run 2	Oxygen	159.6	112	1.21		119.38	40.22	1.11	Ī	-0.10
	CO2	0	42			44.77	44.77		Ī	
					Ū					
Run 3	Oxygen	159.6	115	1.28	$\bar{\Pi}$	122.58	37.02	1.15		-0.13
	CO2	0	40		Ū	42.64	42.64			:
									-	
Run 4	Oxygen	159.6	119	1.34		126.84	32.76	1.20		-0.14
	CO2	0	37			39.44	39.44			
Run 5	Oxygen	159.6	118	1.36		125.78	33.82	1.17		-0.19
	CO2	0	37			39.44	39.44			
				*				=	Name of the least	=
			Average	1.27	U		Average	1.15	-	-0.12

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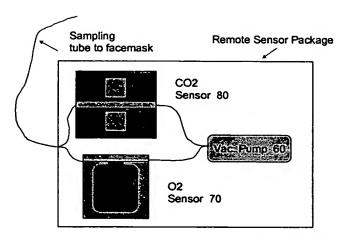
Attorney: Michael P. Dunnam Sheet 7 of 11

Phone: (215) 568-3100



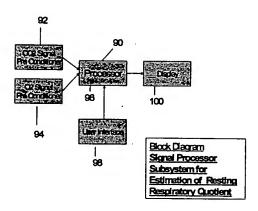
Docket No.: BRAG-0002
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Sheet 8 of 11

#### FIGURE 8



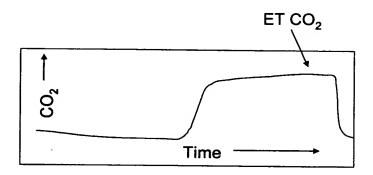
Block Diagram
Sidestream Apparatus for
Estimation of Resting
Respiratory Quotient

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Sheet 9 of 11



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Sheet 10 of 11

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Sheet 11 of 11

